

32692  
Customer Number

Patent  
Case No.: 57906US004

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

First Named Inventor: MARTIN RIVERA, MARIA DEL CARMEN  
Application No.: 10/554213 Confirmation No.: 4511  
Filed: 02-APR-2004 Group Art Unit 1794  
Title: SCOURING MATERIAL

---

**BRIEF ON APPEAL**

Mail Stop: Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR § 1.8(a)]**  
I hereby certify that this correspondence is being transmitted to United States Patent and Trademark Office on the date shown below via the Office electronic filing system.  
August 30, 2010 /Susy Hendrickson/  
Date Signed by: Susy Hendrickson

---

Dear Sir:

This is an appeal from the Office Action mailed on March 2, 2010 finally rejecting claims 21-34.

**Fees**

- ☐ Any required fee under 37 CFR § 41.20(b)(2) will be made at the time of submission via EFS-Web. In the event fees are not or cannot be paid at the time of EFS-Web submission, please charge any fees under 37 CFR § 1.17 which may be required to Deposit Account No. 13-3723.
- ☐ Please charge any fees under 37 CFR §§ 37 CFR § 41.20(b)(2) and 1.17 which may be required to Deposit Account No. 13-3723.
- ☒ Please charge any additional fees associated with the prosecution of this application to Deposit Account No. 13-3723. This authorization includes the fee for any necessary extension of time under 37 CFR § 1.136(a). To the extent any such extension should become necessary, it is hereby requested.
- ☒ Please credit any overpayment to the same deposit account.

A Notice of Appeal in this application was filed on July 2, 2010, and was received in the USPTO on July 2, 2010.

**REAL PARTY IN INTEREST**

The real party in interest is 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

**RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any related appeals or interferences.

**STATUS OF CLAIMS**

In the Final Office Action mailed March 2, 2010, claims 21-34 were rejected. Claims 1-20 and 35-40 were previously canceled. Claims 21-34 remain pending and are the subject of the present Appeal.

**STATUS OF AMENDMENTS**

No amendments have been filed after the final rejection.

**SUMMARY OF CLAIMED SUBJECT MATTER**

The subject matter of the pending independent claim relates to a scouring material. Independent claim 1 relates to a scouring material 1 shown in FIG. 1. The scouring material comprises a three-dimensional nonwoven web 1 of entangled fibers 3 (FIG. 1) bonded to one another at their mutual contact points 5 by a pre-bond resin. (p. 3, lines 18-20; p. 4, lines 5-12, 26-28). Greater than 50% by weight of the fibers of the scouring material comprise natural fibers. (p. 3, lines 20-21). The bonded web has a maximum density of 50 kg/m<sup>3</sup>. (p. 3, lines 23-28). The scouring material 1 further comprises a plurality of abrasive particles 7 adhered to the fibers 3 of the bonded web 1 by a make-coat resin. (p. 3, lines 20-21; p. 4, lines 11-12, 27-28).

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL****First Ground of Rejection**

Claims 21-34 stand rejected under 35 USC § 103(a), as purportedly unpatentable over the teaching of WO 01/28741.

## ARGUMENT

### First Ground of Rejection

Claims 21-34 stand rejected under 35 USC § 103(a), as purportedly unpatentable over the teaching of WO 01/28741. The Examiner bears the burden under 35 USC § 103(a) of establishing a *prima facie* case of obviousness. The '741 application provides no teaching, suggestion or guidance to one of skill in the art for each and every element of the claimed scouring material. Further, the '741 application does not provide any kind of teaching that would enable one of skill in the art that the claimed scouring material could be made based on the teaching of the '741 application.

The present application is specifically directed to an open, lofty, three-dimensional nonwoven web that has a large portion of natural fibers. The scouring web also includes a pre-bond resin for securing the fibers together, as well as a make coat resin for securing abrasive particles to the web. In making the disclosed scouring material, it was surprising that use of a large amount of natural fibers, greater than 50% by weight, could result in an open, lofty, three-dimensional nonwoven having the claimed density. Typically, prior nonwoven webs that include a large amount of natural fiber tend to compress and lose loft when the various resin coatings and abrasive particles are applied. (see p. 2, lines 4-14).

The '741 application teaches an abrasive article that is especially suited for use in critical or controlled environments such as clean rooms. The flexible abrasive articles disclosed comprises a foraminous substrate, at least one binder, and abrasive particles, wherein the abrasive article contains a minimal amount of releasable physical and chemical contaminants. The disclosed abrasive article is capable of cleaning a work piece surface in a clean room without damaging the surface and minimizes the release of particles and the transfer of ionic contaminants into the clean room environment.

The '741 application discloses that the foraminous substrate may be an open, lofty three-dimensional nonwoven fabric of fibers. Also, it is disclosed that the "fibers used in the manufacture of the nonwoven web include both natural and synthetic fibers and mixtures thereof." (p. 5, line 7-8). The '741 application gives absolutely no specifics as to the amount and quantity of natural fibers that may be used to create the open, lofty three-dimensional nonwoven web. No particular importance is placed on the nature of the substrate of the abrasive article other than it is foraminous. The use of natural fibers is only mentioned in passing and is not preferred or exemplified. In fact, synthetic fibers are preferred (page 5, line 8). Foam materials and nonwovens formed from synthetic fibers (polyester) are presented in the examples.

There is nothing in the '741 application to teach a person of ordinary skill in the art who is attempting to reduce the environmental impact of discarding synthetic scouring materials to develop an open, lofty, three dimensional scouring material that has a large amount of natural fibers. An abrasive article formed from a nonwoven substrate having a majority of natural fibers that is capable of degrading in an environmentally acceptable manner certainly is not contemplated or suggested by the '741 application.

There is no explicit or implied disclosure in the '741 patent to teach or suggest to one skilled in the art the disclosed scouring web. Further, as described in the present application, maintaining a lofty, open, web when applying make coat resin and abrasive particles is difficult when using natural fibers. There is no disclosure in the '741 patent to teach or enable one of skill in the art how to make the claimed scouring web having a high amount of natural fibers, make coating, abrasive particles, and still being open and lofty.

It is respectfully submitted that the '741 application does not teach or suggest the claimed scouring material. Claim 1 is allowable for the reasons given. Claims 22-34 depend from claim 21 and are allowable for at least the same reasons. Applicants assert that the rejection of claims 21-34 should be reversed.

**CONCLUSION**

For the foregoing reasons, appellants respectfully submit that the Examiner has erred in rejecting this application. Please reverse the Examiner on all counts.

Respectfully submitted,

8/30/2010  
Date

By:           /Trisha D. Adamson/  
Trisha D. Adamson, Reg. No.: 55,860  
Telephone No.: 651-736-9296

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
Facsimile No.: 651-736-3833

**CLAIMS APPENDIX**

21. A scouring material comprising:

a three-dimensional non-woven web of entangled fibres bonded to one another at their mutual contact points by a pre-bond resin, wherein greater than 50% by weight of the fibres comprise natural fibres, and the bonded web has a maximum density of 50 kg/m<sup>3</sup>; and

a plurality of abrasive particles adhered to the fibres of the bonded web by a make-coat resin.

22. The scouring material of claim 21, wherein the bonded web has a maximum density of 30 kg/m<sup>3</sup>.

23. The scouring material of claim 21, wherein the bonded web has a minimum thickness of 5 mm.

24. The scouring material of claim 21, wherein at least 80% by weight of the fibres comprise natural fibres.

25. The scouring material of claim 21, wherein all of the fibres comprise natural fibres.

26. The scouring material of claim 21, wherein the natural fibres are natural vegetable fibres.

27. The scouring material of claim 21, wherein the natural fibres comprise coco, sisal, or hemp fibres, or a combination thereof.

28. The scouring material of claim 21, wherein the pre-bond resin is a thermosetting or a thermoplastic resin.

29. The scouring material of claim 21, wherein the pre-bond resin is an epoxy resin or a copolyamide resin.

30. A The scouring material of claim 21, wherein the make-coat resin is a latex or a phenolic resin.

31. The scouring material of claim 21, wherein the abrasive particles comprise an inorganic material and have an average particle size of about 50 microns.

32. The scouring material of claim 21, wherein the abrasive particles comprise a polymeric material or a natural material.

33. The scouring material of claim 21, wherein the non-woven web is a dry-laid web.

34. The scouring material of claim 21, wherein the scouring material forms a hand-held scouring pad.

**EVIDENCE APPENDIX**

None.



**RELATED PROCEEDINGS APPENDIX**

None.